

CONFIGURATION OF PLAYBACK DEVICE AUDIO SETTINGS

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority under 35 U.S.C. § 120 to, and is a continuation of, U.S. non-provisional patent application Ser. No. 16/376,219, filed on Apr. 5, 2019, entitled “Configuration of Playback Device Audio Settings,” which is incorporated herein by reference in its entirety.

[0002] U.S. non-provisional patent application Ser. No. 16/376,219 claims priority under 35 U.S.C. § 120 to, and is a continuation of, U.S. non-provisional patent application Ser. No. 14/958,598, filed on Dec. 3, 2015, entitled “Configuration of Playback Device Audio Settings,” and issued as U.S. Pat. No. 10,271,078 on Apr. 23, 2019, which is incorporated herein by reference in its entirety.

[0003] U.S. non-provisional patent application Ser. No. 16/180,952 claims priority under 35 U.S.C. § 120 to, and is a continuation of, U.S. non-provisional patent application Ser. No. 13/767,850, filed on Feb. 14, 2013, entitled “Automatic Configuration of Household Playback Devices,” and issued as U.S. Pat. No. 9,237,384 on Jan. 12, 2016, which is incorporated herein by reference in its entirety.

FIELD OF THE DISCLOSURE

[0004] The disclosure is related to consumer goods and, more particularly, to systems, products, features, services, and other items directed to media playback or some aspect thereof.

BACKGROUND

[0005] Technological advancements have increased the accessibility of music content, as well as other types of media, such as television content, movies, and interactive content. For example, a user can access audio, video, or both audio and video content over the Internet through an online store, an Internet radio station, a music service, a movie service, and so on, in addition to the more traditional avenues of accessing audio and video content. Demand for audio, video, and both audio and video content inside and outside of the home continues to increase.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] Features, aspects, and advantages of the presently disclosed technology may be better understood with regard to the following description, appended claims, and accompanying drawings where:

[0007] FIG. 1 shows an example configuration in which certain embodiments may be practiced;

[0008] FIG. 2A shows an illustration of an example zone player having a built-in amplifier and transducers;

[0009] FIG. 2B shows an illustration of an example zone player having a built-in amplifier and connected to external speakers;

[0010] FIG. 2C shows an illustration of an example zone player connected to an A/V receiver and speakers;

[0011] FIG. 3 shows an illustration of an example controller;

[0012] FIG. 4 shows an internal functional block diagram of an example zone player;

[0013] FIG. 5 shows an internal functional block diagram of an example controller;

[0014] FIG. 6 shows an example ad-hoc playback network;

[0015] FIG. 7 shows a system including a plurality of networks including a cloud-based network and at least one local playback network;

[0016] FIG. 8A shows a first example flow diagram for automatically adding a playback device to a secure playback network;

[0017] FIG. 8B shows a second example flow diagram for automatically adding a playback device to a secure network;

[0018] FIG. 8C shows an example flow diagram for automatically configuring a playback device in a playback network.

[0019] FIG. 9A shows a first scenario for adding a playback device to, and configuring the playback device for a secure playback network;

[0020] FIG. 9B shows a second scenario for adding a playback device to, and configuring the playback device for a secure playback network;

[0021] FIG. 9C shows a third scenario for adding a playback device to, and configuring the playback device for a secure playback network; and

[0022] FIG. 10 shows an example interaction between devices when adding a playback device to, and configuring the playback device for a secure playback network of devices.

[0023] In addition, the drawings are for the purpose of illustrating example embodiments, but it is understood that the inventions are not limited to the arrangements and instrumentality shown in the drawings.

DETAILED DESCRIPTION

I. Overview

[0024] Embodiments are described herein that may cause a playback device to be added to a secure network for media playback, and further cause the playback device to be configured. In particular, the embodiments may cause the playback device to be automatically added to the secure network without any action from a user. Further, upon joining the secure network, the playback device may be automatically configured to render media in synchrony with other playback devices in the secure network.

[0025] In one example, the user may acquire a new playback device to render media in synchrony with other playback devices that may already be configured to render media in synchrony within a secure network. In one case, upon powering up the new playback device, the new playback device may send out a join message indicating that the new playback device is available to join the secure network. If the new playback device is within communicative range of a device in the secure network, the join message may be received by the device within the secure network. The device may be another playback device or a controller device. In response to receiving the join message indicating that the new playback device is available to join the secure network, the device in the secure network may then transmit security parameters to the new playback device that can be used for the new playback device to join the secure network.

[0026] In another example, one or more devices in the secure network may be anticipating the join message from the new playback device indicating that the new playback device is available to join the secure network. For instance, the controller device may receive a configuration table